

Project Business Case

Project Name: Online Reporting System Upgrade

Project Short Name: ORS Upgrade

Agency: North Dakota Department of Public Instruction

Business Unit/Program Area: Management Information Systems

Type of Project: New Initiative *(Select One)*

Major enhancement/upgrade *

Application replacement

Ongoing Initiative

Date: 3/28/2006

Version: 1.0

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Project Description:

- Objective 1: Upgrade current ORS core system to an architecture of ASP.NET, VB.NET and SQL Server 2005.
Cost: \$180,000 (**current contract in progress with Nexus Innovations.**)
Schedule: Contract is through June 2007. (This objective will be completed by March 31, 2006)
Quality Measures: Core system is running on new Architecture, Project Objective is completed on-time and on-budget.
- Objective 2: Implement enhancements to upgrade core system.
Cost: \$100,000
Schedule: New task order with Nexus through June 2007.
Quality Measures: Enhancements functional and working to user satisfaction. Project Objective is completed on-time and on-budget.
Examples: Data snapshot module
NDDPI Administrative module
Enhanced auditing capabilities
- Objective 3: Move individual collections to upgraded ORS and implement other enhancements requested by Districts and State for individual collections.
Cost: \$200,000
Schedule: New task order with Nexus through June 2007.
Quality Measures: Other enhancements for individual reports are functional and working to user satisfaction. Project Objective is completed on-time and on-budget.
Ex: Move & enhance Teacher Compensation Claim, Employee Compensation collection, Pupil Membership collection, Fall Enrollment collection, Special Education Membership collection, MIS01 collection, MIS02 collection, MIS03 collection, PER02 collection, Professional Development collection, Assessment Demographics collection, Fall Calendar collection, Spring Calendar collection, Transportation collection, Vehicle Inventory collection, Special Ed/Voc-Ed Teacher claim, Limited English Proficient collection, Homeless collection, Migrant collection, Refugee collection, Immigrant collection.
- Objective 4: Implement necessary enhancements to replace some of the required components to meet federal and state reporting needs.
Cost: \$200,000
Schedule: **Contract for this would be Phase II after contract for objectives 1-3 are completed.**
Quality Measures: State delivers some of the No Child Left Behind, Education Data Exchange Network and other federal and state reporting requirements using rewritten system. Project Objective is completed on-time and on-budget.

Business Need/Problem:

The Department of Public Instruction began moving from paper data collections to electronic data collections in the fall of 1997. The electronic data collection system implemented at that time was called ORS (Online Reporting System) and it is still in use at this time (2006). Over time, an increasing volume of paper data collections have been moved to electronic data collections on the ORS. Data pertaining to many different aspects of North Dakota's educational system are now collected via ORS. These data describe districts, schools, teachers, students, etc.

The ORS was created using Microsoft ASP technologies, including Visual Basic. In 2003, Microsoft announced that it would no longer support the current version of Visual Basic (effective March 2008), but would instead be moving to a new programming language called Visual Basic.NET. In

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order for NDDPI to maintain the functionality of the ORS, a newly upgraded version of ORS will need to be in place by the fall of 2007 that is compatible with this new language and fully supported by Microsoft. Consequently, development and testing for an upgraded ORS will need to be completed by early 2007 to allow time for deployment, training, and to give required advance notice to school districts. School districts require advance notice of changes in NDDPI's electronic data collection system so they have time to bring their own systems in line for functional data exports to the new system.

In order to achieve this goal within the allotted time, NDDPI has entered into a contract with Nexus Innovations to upgrade the current core system to ASP.NET, VB.NET, and Microsoft SQL 2005 database. Over time, NDDPI has documented many requests for enhancements to the ORS from its users (NDDPI staff, Local Education Agencies, etc.). Some of these enhancements were completed, but many were postponed due to the implementation costs. As this upgrade is taking place, NDDPI will attempt to enhance the current system as much as possible, while still achieving the prime objective of moving the current system to .NET technologies. Due to the scope and budget of the current project, many of the enhancements to the current system were not addressed.

NEW PROJECT:

Additional funds are now being allocated to the ORS Upgrade project. These funds will be used to complete all the necessary & requested enhancements that were not previously possible to complete due to budget constraints. Once ORS upgrades & enhancements are complete, the system will be capable of reporting data in a manner that will comply with No Child Left Behind requirements, Education Data Exchange Network requirements and other Federal & State reporting requirements.

Solution (as described in Proposed Solution):

Doing a work order request for objectives 2,3 & 4 with Nexus would allow NDDPI to put in other foundational changes with the move to .NET along with additional enhancements to ORS that users requested plus enhancements that would replace some of the data collection & reporting for NCLB. This upgraded system would not only reduce staff hours at the school districts but also staff hours at the state. This more modular system would allow for future growth as new reporting requirements are created from Federal or State legislation. This system would also address the growing need for reporting on education data to State & Federal officials and the general public. Also until all reports are moved to the new system, staff will have to maintain two systems, so the sooner objective 2 and 3 are accomplished the better.

Consistency/Fit with Organization's Mission:

The mission of the North Dakota Department of Public Instruction is to provide leadership for a comprehensive system of educational opportunities for all people of North Dakota. This system is vital to having a comprehensive system in the state of North Dakota since it is where data is collected and reported in a common manner across all school systems in the state giving opportunities to citizens to evaluate schools in one area of the state to a school in another area of the state. Also the statutes make it necessary for NDDPI to collect and report data to State and Federal agencies.

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Cost Benefit Analysis

Anticipated Benefits:

Benefits of doing project:

- Technology that will be supported for many years.
 - When the technology support for classic asp & vb goes away there would be no way to use Microsoft resources if the underlying architecture fails. If the ORS would end up not working there would not be time to develop a new system within a few weeks and the state and school districts would have to go back to paper collections thus adding extra time to district and state staff, more errors since paper is not automatically validated, some paper documents do not even exist so they would have to be created, etc...
- Less duplication and burden on schools and state staff for reporting data to NDDPI.
 - Although many reports have moved to ORS there are still many collections that need to become electronic. Things like suspension expulsion, neglected/delinquent are still collected on paper and much of the information on these paper reports is duplicative across reports.
- Better flexibility in collecting and reporting on multi-organizational education entities (JPA's, Special Education Units, Vocational Education Units, etc...).
 - The current ORS system is a district based system whereas the rewritten system will be entity based. This way you can have users filling out multiple reports for more than one district or entity with the same ID. This also lends itself to having non-traditional entities that incorporate both public and non-public schools being able to fill out one report for a multi-organizational entity instead of individual reports for each district.
- More modular programming to make future modifications easier.
 - The rewritten ORS system is being developed to make use of reusable API's, services, etc... This way a report can just reuse these modules without having to write a special one for each report. This will cut down on programming time since you can reuse something already there.

Implications of NOT doing project:

- Old technology that will not be supported in 2008.
- Continued reporting duplication from schools to state.
- Staff burden will continue to increase as data collection needs increase.
- Difficult to report on multi-organizational education entities.
- More time and expense to modify current system.

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Cost Estimate:

- All cost amounts are paid with Federal funds.
- No charge back costs to schools.

Objective	Cost	Note
1-1 st contract	\$180,000	Upgrade current ORS core system to an architecture of ASP.NET, VB.NET and SQL Server 2005. (current work order in progress with Nexus Innovations.)
2-2 nd contract	\$100,000	Implement enhancements to upgrade core system.
3-2 nd contract	\$200,000	Move individual collections to upgraded system and implement other enhancements requested by Districts and State for individual collections.
4-3 rd contract	\$200,000	Implement necessary enhancements to meet some of the required federal and state reporting needs.

Cost/Benefit Analysis:

Objective 1: Upgrade current ORS core system to an architecture of ASP.NET, VB.NET and SQL Server 2005.

Dollar Cost	Benefit	Justification	Savings
\$180,000	Technology that will be supported for many years.	When the technology support for classic asp & vb goes away there would be no way to use Microsoft resources if the underlying architecture fails. If the ORS would end up not working there would not be time to develop a new system within a few weeks and the state and school districts would have to go back to paper collections thus adding extra time to district and state staff, more errors since paper is not automatically validated, some paper documents do not even exist so they would have to be recreated, etc...	Foundation Aid payments of roughly \$350,000,000 per year are made using data from ORS. Without this data collected electronically, manual paper processes would have to be developed thus slowing down vital payments to schools.
	More modular programming to make future modifications easier	The rewritten ORS system is being developed to make use of reusable API's, services, etc... This way a report can just reuse these modules without having to write a special one for each report. This will cut down on programming time since you can reuse something already there.	All programs on the current ORS system If you add up the individual pieces developed over the years, the total hours would be around 3000 hours or (3000 x \$100.00) \$300,000.00 dollars. With modular programming the hours will only take 2000 hours or (2000 x \$100.00) \$200,000 dollars. This represents a savings of \$100,000.00.

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Objective 2: Implement enhancements to upgrade core system.

Dollar Cost	Benefit	Justification	Savings
\$100,000	New reporting capabilities.	The current ORS system is a district based system whereas the rewritten system will be entity based. This way you can have users filling out multiple reports for more than one district or entity with the same ID. This also lends itself to having non-traditional entities that incorporate both public and non-public schools being able to fill out one report for a multi-organizational entity instead of individual reports for each district.	This feature is something new that currently does not exist. Since it does not currently exist there are no savings to report. However, with new reporting laws for JPA's this type of reporting is required by law. This feature will save money in the future if new federal or state legislation requires other kinds of multi-organizational reporting.
	Enhancing auditing capabilities	Current system is hard to see who is making changes to data. With additional auditing capabilities districts could look at how their data has changed and who is changing it.	The current ORS system keeps a record of the final submit of a report. This is 1 record with 10 fields. Under the new system 3 new tables have been added. Also added will be multiple record functionality. This will add tracked information by a ration of up to 10 to 1. With the additional tables and fields this adds over 100 new elements that will be tracked along with multiple records that could range from 10 – unlimited to track changes.

Objective 3: Move individual collections to upgraded ORS and implement other enhancements requested by Districts and State for individual collections.

Dollar Cost	Benefit	Justification	Savings
\$200,000	Avoidance, reports will be supported on newer technology.	Reports sit on top of an architecture that will not be supported after March of 2008. Objective 1 is addressing this with redoing the frame work to .NET which will be supported. However, the individual reports will need to be made to run on top of this new architecture.	Critical reports that collect data for Foundation Aid payments could potentially not work on the new architecture if they are not updated. If this were the case manual paper processes would have to be developed thus slowing down vital payments to schools. The schools rely on these payments which add

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			up to \$350,000,000 per year. If the money is not in their account in time they cannot make their expense payments.
	Less duplication on schools to report data to NDDPI.	Although many reports have moved to ORS there are still many types of collections that need to become electronic. Things like suspension expulsion, neglected/delinquent are still collected on paper. Some of the data is duplicated on the paper and electronic forms. If these additional types of collections were added to the ORS system, schools would enter the data once for the multiple Federal reporting requirements. In addition, NDDPI staff would only have to look at one source of data to complete the required Federal reports.	With less duplication of data, District staff would just need to report once. This would also cut down on State resources having to work on multiple collections. Currently districts spend approximately 80 man-hours putting together information for the state collections. With reduced duplication the districts will cut that down by 15 man-hours. With an average wage of \$12.00 per hour x 488 school plants x 15 hours, this comes out to a savings of \$87,840 per year.

Objective 4: Implement necessary enhancements to replace some of the required components to meet federal and state reporting needs.

Dollar Cost	Benefit	Justification	Savings
\$200,000	Reports are submitted on time avoiding penalties for late reporting	With data requests always on the increase from Federal Agencies and the increase in these reports becoming requirements the State is at an ever increasing risk of being penalized for late reporting.	The State could potentially be penalized by the Federal Education Department for late reporting if a better system is not implemented that allows for faster reporting. This could vary any where from thousands of dollars to millions of dollars depending on the penalty and the individual program.
	Less staff burden in reporting on data thus avoiding the need to hire additional FTE's for data reporting to the federal agencies.	With the current structure of information within multiple places. NDDPI staff currently spends a lot of manual resources putting the different data sources together to create reports. A more automated reporting system would save a lot of the manual process that currently happens.	Staff would be able to catch up on the backlog of requests. Some requests are more than a month behind due to priorities. Better reporting features could potentially reduce this to weeks. Also, with the increased demand for federal electronic data DPI will need to add an additional FTE to report this data with the current reporting system. This

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			would cost the state more than \$200,000 over a multi-year period with benefits included in the cost of an additional FTE. With the implementation of the enhanced reporting features the State could save on creating additional FTE's for this purpose.
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Project Risks:

RISK	IMPACT	MITIGATION	LEVEL
Because the budget and schedule are set, the project plan will be made to fit the schedule and budget constraints.	Quality of the end product may be compromised to complete the project on time and budget.	Contract is on a time and materials base so extreme flexibility can be used to steer the project as needed. Management may need to reallocate extra monies to project if the costs go over budget.	High
NDDPI staff resources available to work on the project are limited.	Because limited staff is working on the project, those assigned may feel stressed. The quality of the product may be compromised.	Backfill staff as budget will allow. Redirect work to other staff when feasible. Bring in ITD staff through the work request process. Staff recognition and encouragement must take place.	High
Normal day-to-day work may be neglected due to staff resources being assigned to the project.	Work may be backlogged. Customer expectations may not be met. Staff may become stressed due to workloads.	Realign services provided with the resources available. Manage expectations. Management must set prioritization of tasks. Backfill staff as budget will allow.	High
Slow decision making process on major decisions	Due to the large make-up of the steering committee getting input from everyone could take some time	Use email when necessary to get consensus on major decisions.	High
Timelines for school to upgrade their electronic	With this system needing to be completed by the fall of 2007	Allow alternative methods for districts to report if their	High

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systems may not be large enough.	so schools can start reporting data. Schools need to know what needs to change on their systems to allow time to upgrade their systems.	systems have not been changed in time to report the data electronically.	
Schools not sure if their data is reported on the correct system	Schools may not know they have entered their data.	DPI will continue current practice of letting schools know if they are late with their reports. Also the system that is not active for a particular report will not allow data entry.	Med

Project Business Case Approval

Project Sponsor Name: G. David Massey Action: Approve: ☐ Reject: ☐

Project Sponsor Signature: _____ Date: _____